Community Environmental Council

June 22, 2007

California Energy Commission
Docket Office
Attn: Docket No. 06-IEP-1K, "2007 IEPR Cost of Generation"
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512

Dear Ms. Rednam,

We applaud the 2007 update to the Commission's levelized cost of electricity model. Even though the cost of every generation technology was increased in the 2007 model, we believe the update reflects more accurate estimates than the 2003 version.

We have not had time, unfortunately, to review the model in detail and we hope to continue discussion with Commission staff prior to completion of the 2007 IEPR.

We note, however, that the projected cost of ocean wave energy is too high. The 2007 report assumes almost $7,000/kW for a wave power device and only a 15% capacity factor. We understand that this data came directly from Navigant Consulting, but note for the record that the Electric Power Research Institute, which was ostensibly the source for Navigant's data, does not support the figures supplied by Navigant.

Rather, an email provided by Roger Bedard, Ocean Energy Leader at EPRI, written by a former employee of EPRI who drafted the Oregon ocean energy report that Navigant cites as its data source, states:

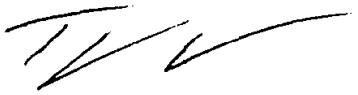
> The EPRI Oregon report I wrote in 2004 shows an installed cost of $235 million for a 90MW wave farm ($2600/kW) and an installed cost for a single unit of $4.6 million (costs given in 2004 dollars). If I'd re-calibrate my costing model based on today's data, I would probably come out at > $3000/kW for the commercial plant and at about $6 million for the single unit based on updated numbers of actually building these units (reflecting increased raw material cost etc.). All costs refer to the OPD Pelamis unit, which may or may not be applicable to other technologies.
>
> As for capacity factor, the report states that the commercial plant has:

Capacity per unit:	500kW
Average Electrical output at busbar:	191kW
Calculated Net Capacity Factor:	38.2%

I am not sure where the 15% [in the IEPR report] came from. The only thing I can think of is that when I looked at the extractable potential for wave energy conversion schemes for the CEC I came up that different schemes had an average wave to wire power conversion efficiency of 9%-30% depending on technology selected and then stated that a reasonable number would be 15% to estimate the technically extractable potential for the State of California. This had nothing to do with a capacity factor, but refers to how much of the primary resource could realistically be extracted using available technology today and is largely driven by how closely together these devices can be placed (i.e. array internal spacing).

In light of this information, we request that Commission staff inquire further as to where the Navigant data for ocean power, and all renewables, came from.

Sincerely,



Tam Hunt
Energy Program Director / Attorney